

PRITULO, K.G.; YELIZAROV, N.N., otv.red.; KOTLYAKOVA, O.I., tekhn.red.

[Regulations on equipping and supplying ships with signaling equipment] Pravila oborudovaniia i snabzheniia signal'nyimi sredstvami morskikh sudov. Leningrad, Izd-vo "Morskoi transport," 1959. 53 p. (MIRA 12:9)

1. Russia (1923- U.S.S.R.) Glavnaya upravleniye morskogo registra.  
(Signals and signaling)

YELIZAROV, N.N.

New regulations for painting ships of the Ministry of the  
Merchant Marine. Trudy TSNIIMT no.25:95-99 '59.

(MIRA 12:8)

(Ships--Painting)

YELIZAROV, N.N.

Some characteristics of the blood coagulation system in Botkin's disease during pregnancy. Akush. i gin. 39 no.5:61-65 S-0 '63.  
(MIRA 17:8)

1. Iz kafedry akusherstva i ginekologii (zav. - zasluzhennyy deyatel' nauki prof. K.N. Zimakin) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

YELIZAROV, H.N., inzh.; MENKOVSKIY, A.E., inzh.

Design method for estimating the height of the turbulent zone boundary  
above a vessel. Sudostroenie 26 no.10:5-9 0'60. (MIRA 13:10)  
(Fluid mechanics)

YELIZAROV, N.N., inzh.; NEMKOVSKIY, A.E., inzh.

Design of navigating bridges for seagoing vessels. Sudostroenie 27  
no.3:5-9 Mr '61.

(MIRA 14:3)

(Hulls(Naval architeture)  
(Ship handling)

YELIZAROV, N.N. (Moskva); FARBER, N.A. (Moskva)

Hemorrhagic syndrome in Botkin's disease in pregnancy. Vop.med.  
virus. no.9:270-275 '64. (MIRA 18:4)

YUDIN, N.A., inzh.; VORONKOVA, G.V., inzh.; YELIZAROV, N.Ye.

New lead-containing product for the manufacture of glassware  
and artistic glass. Stek. i ker. 22 no.8;18-19 Ag '65.  
(MIRA 18:9)

1. Gusevskoy filial Gosudarstvennogo nauchno-issledovatel'skogo  
instituta stekla (for Yudin, Veronkova). 2. Glavnnyy inzhener  
Stekol'nogo zavoda imeni Sverdlova (for Yelizarov).

Processing of metallic aluminum; the theory of aluminum oxide electrolysis Moskva,  
TSvetmetizdat, 1932. (Mic 53-80) Collation of the original: 207 p.

Microfilm TN-5

137-58-6-11898

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 101 (USSR)

AUTHOR: Yelizarov, P.G.

TITLE: The Experience of the Volkov Works in Perfecting the Production of Aluminum by Electrolysis (Optyt Volkovskogo zavoda v usovershenstvovanii elektroliticheskogo proizvodstva alyuminiya)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 8, pp 59-64

ABSTRACT: The technical parameters of the electrolytic production of Al at the Volkov Aluminum Works improved considerably from 1947 to 1956 (see table). The improvement in these parameters is due to a combination of a rise in cd in the baths and conversion to electrolytes with low cryolite ratios, an increase in the depths both of the Al and of the electrolyte in the bath, and the maintenance of more uniform current on the line. Contrary to opinion previously held, maintenance of a constant line current and absence of significant current fluctuations yields a rise of several percent in Al current efficiency. A significant role in improving the electrolysis process procedure was also played by an increase in the depths of metal and electrolyte in the bath owing to increased heat retention by the cells and improved

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## The Experience of the Volkov Works (cont.)

Parameter	Year	
	1947	1956
Line current, amps	32236	40217
Bath output, kg/day	207	294.9
Current efficiency, %	79.7	91.21
A-C power consumed, kwh/t	20,230	17,522
Anode cd, amps/cm <sup>2</sup>	0.90	1.14
Cathode cd, amps/cm <sup>2</sup>	0.53	0.58
Cryolite ratio	3.0	2.20

conditions for the dissolution of the Al<sub>2</sub>O<sub>3</sub> immersed in the bath. However, the fundamental cause of the improvement was enrichment of the electrolyte with AlF<sub>3</sub>, with the result that dissolution of metallic Al and oxidation thereof diminishes, current efficiency increases, and - in connection therewith - the possibility and necessity arises for an increase in current to compensate for heat losses in the cell formerly covered by the heat of oxidation of the Al dissolving in the electrolyte. A significant role in increasing current efficiency is also played by the maintenance of a high concentration of Al<sub>2</sub>O<sub>3</sub> in the electrolyte. The higher the concentration of Al<sub>2</sub>O<sub>3</sub> in the electrolyte, the

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137-58-6-11898

The Experience of the Volkhov Works (cont.)

lower the Al losses and the higher the current efficiency. This is explained by the inhibition of the oxidation reactions by anode gases from the Al dissolved in the electrolyte.

I.G.

1. Aluminum--Electrolysis
2. Electrolysis--Effectiveness
3. Aluminum--Production
4. Electrolytes--Materials

Card 3/3

SOV/137-59-3-5495

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 79 (USSR)

AUTHOR: Yelizarov, P. G.

TITLE: Water-power and Raw-material Resources of the Area for the Development of an Aluminum Industry (Gidroenergeticheskiye i syr'evyye resursy kraya — razvitiyu aluminiiyevogo proizvodstva)

PERIODICAL: Tekhn.-ekon. byul. Sovnarkhoz Krasnoyarskogo ekon. adm. r-na, 1958, Nr 2, pp 16-20

ABSTRACT: The construction of a large complex of aluminum industry based on the nepheline deposit of the Goryachaya Mountain (Sharypovskiy rayon) and the cheap energy of the Krasnoyarsk Hydroelectric Station is under consideration. The industrial complex will consist of the following: The Uzhur open-pit mine with mechanical ore concentration, the Achinsk alumina and cement plants, and the Krasnoyarsk aluminum and rolling plants. Use of the nearby deposits of high-grade limestone and fuel for the production of  $\text{Al}_2\text{O}_3$  and cement is proposed. 130,000-amp electrolyzers are to be installed, and progressive technology is to be practiced at the aluminum mill. The specified current efficiency is  $>90\%$ , the specific

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SOV/137-59-3-5495

Water-power and Raw-material Resources of the Area for the Development (cont.)

consumption of electric energy is 15,150 kwh.[sic!]. A powerful system for drawing off and absorption of gases and reutilization of recovered dusts and HF in the process are provided for. According to the specifications the cost (C) of 1 ton Al<sub>2</sub>O<sub>3</sub> will be 608 rubles; with full utilization of waste products it will be 477 rubles, while the C of cement will be 50% lower than it is at the cement plants now in operation. C of Al will be 2,841 rubles.

I. G.

Card 2/2

KOMPANIETS, Mariya Fedorovna; YELIZAROV, P.G., inzh., retsenzent;  
BELYAEV, A.I., red.; EL'KIND, L.M., red.izd-va; ISLEN'TIEVA,  
P.G., tekhn.red.

[Crystallographical and optical analysis in the aluminum  
industry] Kristalloopticheskii analiz v aliuminievom pro-  
izvodstve. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po  
chernoi i tsvetnoi metallurgii, 1959. 179 p. (MIRA 12:6)  
(aluminum--analysis) (Crystallography)

YELIZAROV, P.P.

F

M

4146. OPERATION OF BOILER PLANTS OF ELECTRICAL POWER STATION.  
(EXPLOITATSIIA KOTEL'NIKH USTANOVOK IZLICHITEL'NOI). Olsubtov, V.A.  
and Elizarov, P.P. (Moscow, Leningrad: 1950, 812pp.; title in Russian  
Accessions, Brit. Museum).

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610011-4

GULIUDOV, V. A. AND ISLIVAROV, P. P.

"Installation and Operation of Steam Boilers in Electrical Power Plants," 1951.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610011-4"

YELIZAROV, P.P.

AID P - 2394

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 8/15

Authors : Yelizarov, P. P. Kand. Tech. Sci., and Teplov, S.V., Eng.

Title : Heat losses at the start and stoppage of the TP-170 boiler

Periodical : Teploenergetika, 7, 38-44, J1 1955

Abstract : The authors report on results of tests made on heat losses during normal operations of a boiler of the TP-170 type. The tests are explained in detail, with tables and curves. Nine diagrams.

Institution: Moscow Power Engineering Institute

Submitted : No date

CHILIKIN, M.G., red.; BEL'KIND, L.D., red.; YELIZAROV, P.P., red.; MESHKOV, V.V., red.; NIKITIN, S.P., red.; PEREKALIN, M.A., red.; PRUZNER, S.L., red.; SHNEYBERG, Ya.A., red.; IGLITSYN, I.L., red.; ANTIK, I.V., red.; SKVORTSOV, I.M., tekhn. red.

[Fifty years of the Moscow Order of Lenin Power Engineering Institute]  
50 let Moskovskogo ordena Lenina energeticheskogo instituta imeni V.M.  
Molotova. Moskva, Gos. energ. izd-vo, 1955. 302 p. (MIRA 14:8)  
(Power engineering)

YELIZAROV, P.P., kandidat tekhnich eskikh nauk.

Conclusions and generalizations from the analysis of boiler  
troubles in electric power stations. Trudy MEI no.25:161-180  
'55. (Boilers) (MIRA 9:7)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610011-4

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CIA-RDP86-00513R001962610011-4"

YELIZAROV, Pavel Pavlovich; SHITSMAN, S.Ye., inzh., retsenzent;  
KATKOVSKAYA, K.Ya., red.; VORONIN, K.P., tekhn.red.; LARIONOV,  
G.Ye., tekhn.red.

[Operating high-pressure boiler units at electric power plants]  
Eksploatatsiia kotel'nykh ustrojstv vysokogo davleniya na  
elektrostantsiiakh, Moskva, Gosenerg.izd-vo, 1961, 399 p.  
(MIRA 14:6)

1. Moskovskiy ordena Lenina energeticheskiy institut (for  
Shitsman).  
(Boilers)      (Steam power plants)

KONNOV, M.P.; ZAVOROTKOV, L.M., mekhanik; YELIZAROV, P.P., inzh.-mekhanik

Using the SN-2 snow removal machine for station track cleaning.  
Put' i put.khoz. 7 no.2:18-19 '63. (MIR 16:2)

1. Nachal'nik stantsii Batraki, Kuybyshevskoy dorogi (for Konnov).
2. Stantsiya Batraki, Kuybyshevskoy dorogi (for Zavorotkov).
3. 1-ya Moskovskaya distantsiya (for Yelizarov).

YELIZAROV, S.

5093049

VYDAYUSHCHIYESYA PROIZVEDENIYA LITERATURY ZA 1951 GOD PY) S. YELIZAROV I  
B. KUSHELEV. MOSKVA, IZD-VO ZNANIYE, 1952. 47, (1) p. (VSEGOVUZKOE OBSH-  
CHESTVO PO RASPROSTRANENIYU POLITICHESKIKH I NAUCHNYKH ZNANIY. 1952, SERIYA 3,  
NO. 46) BIBLIOGRAPHY: p. 45-(48)

YELIZAROV, S., inzhener.

Uniform norms at enterprises of a trust. Sots. trud no.10;92-93 O '56.  
(MLRA 9:11)

1. Otdel rabochikh kadrov, truda i zarabotnoy platy tresta "Stalin-gradneftegazrazvedka".  
(Prospecting--Production standards)

YELIZAROV, S., inzh.-podpolkovnik; KHARCHENKO, I., inzh.-podpolkovnik.

A new fuel unit. Tankist no. 4:50-53 Ap '58.  
(Gas and oil engines)

(MIRA 11:5)

GRINEVITSKIY, Yu.S., arkhitektor; YELIZAROV, S.I., inshener.

Landscape grounds of the Central Moscow stadium. Gor.  
khoz. Mosk. 30 no.9:13-15 S '56. (MLRA 9:12)

(Moscow--Landscape gardening)

L 1920-1-10 SWT.3., SWT.1., ENP.V., SWT.4., SWT.5., SWP.1., ETC(m).  
ACC NRI AP5028510

13

**AUTHOR:** Yelizarov, S. I.

SOURCE CODE: UR/0286/65/000/020/0095/0096

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B

## ORGANIC BONDS

## ORGANIC BONDS

**TITLE:** Installation for coded regulation of delivery of liquid. Class 42, No.  
**175742**

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 95-96

TOPIC TAGS: liquid level gage, <sup>25</sup>liquid level, valve

**ABSTRACT:** This Author Certificate describes an installation for coded regulation of delivery of liquid containing discrete volumetric delivery gages. To increase the accuracy and speed of performance, the installation contains several sections which work in parallel. Each section consists of one or several identical volumetric measuring devices, an inverse meter the inlet channels of which are connected with the input lines of the regulating coder, and differentiating cells which are connected with the terminal switches of the measuring devices, a logical scheme connected with the meter, and the terminal switches and valves of the measuring devices.

SUB CODE: 13, 14 / SUBM DATE: 02 Jan 64

UDC: 681.142—522

Card 1/1

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610011-4"

YELIZAROV, V.A., dotsent

"Problems of sanitary statistics" by P.I.Kurkin. Reviewed by  
V.A.Elizarov. Zdrav.Ros.Feder. 6 no.10;35-36 O '62.  
(MIRA 16:4)  
(SANITATION--STATISTICS) (KURKIN, P.I.)

YELIZAROV, V. A.

"Experiment in the Organization of the Fight Against Suppurating Diseases of the Skin and Subcutaneous Tissues in Industrial Installations." Cand Med Sci, Leningrad Sanitary-Hygiene Medical Inst, Min Health RSFSR, Leningrad, 1955. (KL, No 10, Mar 55)

SO: Sum. No . 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

YELIZAROV V. kandidat meditsinskikh nauk

Methods for studying the incidence of diseases among the rural population. Zdrav.Bos.Feder. 1 no.6:18-21 Je '57. (MIRA 10:8)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - prof. B.S.Sigal)  
Leningradskogo sanitarno-gigiyenicheskogo Meditsinskogo instituta  
(MEDICAL STATISTICS)

YELIZAROV, V. A.

"Experience of study of rural population morbidity according  
to the data of Volosovskiy Rayon of Leningradskaya Oblast."

report submitted at the 13th All-Union Congress of Hygienists,  
Epidemologists and Infectionists, 1959.

YELIZAROV, V.A., kand.med.nauk (Leningrad)

Work of the rural sanitary and epidemiological service with the district hospital; data from Kingisepp and Roshchino districts, Leningrad Province. Sov.zdrav. 19 no.1:8-11 '60. (MIRA 13:4)

1. Iz kafedry organizatsii zdravookhraneniya (ispolnyayushchiy obyazannosti zaveduyushchego - dotsent A.P. Mokhnenko) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (direktor - prof. A.Ia. Ivanov).

(LENINGRAD PROVINCE--PUBLIC HEALTH)

GORBADEY, N.K., doktor med.nauk; YELIZAROV, V.A., kand.med.nauk;  
GOLUB, M.G.

Significance of dispensary treatment in preventing the exacerbation  
of hypertension; based on materials from the "Sevkabel'" factory  
in Leningrad. Zdrav.Ros.Feder. 6 no.9:16-19 S '62.  
(MIRA 15:10)

1. Iz kafedry gigiyeny truda s klinikoy professional'nykh bolezney  
(zav. - prof. Ye.TS.Andreyeva-Galanina) i kafedry organizatsii  
zdravookhraneniya (ispolnyayushchiy obyazannosti zaveduyushchego -  
prof. Ye.Ya.Belitskaya) Leningradskogo sanitarno-gigiyenicheskogo  
meditsinskogo instituta i mediko-sanitarnoy chasti (glavnyy vrach  
M.G.Golub) zavoda "Sevkabel'".  
(LENINGRAD--HYPERTENSION)

BURLOVA, L.Ya., kand.med.nauk; YELIZAROV, V.A. (Leningrad)

Study of cardiovascular disease incidence among workers with  
temporary disability. Sov.zdrav. 21 no.8:40-47 '62.  
(MIRA 15:11)

1. Iz kafedry gigiyeny truda (zav. - prof. Ye.TS.Andreyeva-  
Galanina) i kafedry organizatsii zdravookhraneniya (ispolyayushchiiy  
obyazannosti zaveduyushchego - dotsent A.P.Makhnenko) Leningradskogo  
sanitarno-gigienicheskogo meditsinskogo instituta.  
(CARDIOVASCULAR SYSTEM—DISEASES) (DISABILITY EVALUATION)

YELIZAROV, V.D.

YELIZAROV, V.D., otvetstvennyy redaktor; VERZHBITSKIY, N.N., redaktor;  
LAZARENKO, B.I., redaktor; FRUMIN, G.I., redaktor; ZELENKOVA, Ye.  
tekhnicheskiy redaktor

[Problems in mass construction of apartment houses] Voprosy  
massovogo zhilishchnogo stroitel'stva. Kiev, Gos. izd-vo lit-ry  
po stroit. i arkhit. USSR, 1956. 340 p. (MLRA 10:5)

1. Akademiya arkhitektury URSR, Kyiv. Instytut arkhitektury  
sporud.  
(Apartment houses)

YELIZAROV, V.D. [Elizarov, V.D.]; ZHIZDRINSKIY,  
V.H. [Zhizdryns'kyi, V.H.]; ZVENIGORODSKIY, O.M. [Zvenigorods'kyi,  
O.M.]; ZAYCHENKO, R.M. [Zaichenko, R.M.]; IVANENKO, Ye.I. [Ivanenko,  
I.I.]; KOMAR, A.M.; KOS'YANOV, O.M.; KAZAKOV, O.I.; KOSENKO, S.K.;  
KLIMENKO, T.A.; KIR'YAKOV, O.P.; KALISHUK, O.L.; LELICHENKO, M.T.;  
LEBEDICH, M.V.; MIKHAYLOV, V.O. [Mykhailov, V.O.]; MOROZ, I.I.;  
MOSHCHIL', V.Yu. [Moshchil', V.IU.]; NEPOROZHNIY, P.S. [Neporozhniy,  
P.S.]; NEZDATNIY, S.M. [Nezdatnyi, S.M.]; NOVIKOV, V.I.; POLEVYI,  
S.K. [Polevoi, S.K.]; PEREKREST, M.S.; PUZIK, O.Ye. [Puzik, O.E.];  
RADIN, K.S.; SLIVINSKIY, O.I. [Slivins'kyi, O.I.]; STANISLAVSKIY,  
A.I. [Stanislav'skyi, A.I.]; USPENSKIY, V.P. [Uspens'kyi, V.P.];  
KHORKHOT, O.Ya.; KHILYUK, F.P.; TSAPENKO, M.P.; SHVETS, V.I.;  
MAL'CHEVSKIY, V. [Mal'chevs'kyi, V.], red.; ZELENKOVA, Ye. [Zelen-  
kova, E.], tekhn.red.

[The Ukraine builds] Ukraina buduie. Kyiv, Derzh.vyd-vo lit-ry  
z budivnytstva i arkhit., 1957. 221 p. (MIRA 11:5)  
(Ukraine--Construction industry)

DROGICHINSKIY, Nikolay Yemel'yanovich [Drohichyns'kyi, M.O.];  
YELIZAROV, Viktor Dmitriyevich [Elizarov, V.D.]; SELIVANOVA,  
Tat'yana Makaimovna; REZNICHENKO, I.YU., red.; GRISHKO, T.I.  
[Hryshko, T.I.], tekhn.red.

[Seven-year construction plan in the Ukraine] Budivel'na  
semyrichka Ukrayny. Kyiv, Derzh.vyd-vo lit-ry z budivnytstva  
i arkhitektury URSR, 1960. 133 p. (MIRA 14:4)  
(Ukraine--Construction industry)

YELIZAROV, V.D., kand. arkh., red.; MEDVEDEV, M.I., inzh., red.; DEKH-TYAR, S.B., nauchnyy red.; SLIN'KO, B.I., red.; NARINSKAYA, A.L., tekhn. red.

[Large-panel housing construction] Krupnopanel'noe zhilishchnoe stroitel'stvo. Pod obshchei red. V.D. Elizarova i M.I. Medvedeva. Kiev, Gos. izd-vo lit-ry po stroit.i arkhit. USSR, 1961. 194 p. (MIRA 14:12)

1. Akademiya budivnychtstva i arkitektury URSR. 2. Deystvitel'nyy chlen Akademii stroitel'stva i arkitektury USSR (for Yelizarov).  
(Apartment houses) (Precast concrete construction)

YELIZAROV, Vasiliy Fedorovich, kand. ekon. nauk; MATSKEVICH,  
Vladimir Ol'gerdovich; SHNEYDERMAN, K.A., red.

[Economics of production on the Kirov Collective Farm]  
Ekonomika proizvodstva v kolkhoze im. Kirova. Rostov-na-  
Donu, Rostovskoe knizhnoe izd-vo, 1965. 121 p.  
(MIRA 18:8)

1. Predsedatel' kolkhoza imeni Kirova, Zernogradskogo  
rayona, Rostovskaya oblast' (for Matskevich).

YELIZAROV, Vladimir Grigor'yevich; LEVCHUK, K.V., red. izd-va;  
YERMACHKOVA, G.S., red. izd-va; PAVLOVSKIY, A.A. tekhn.red.

[World capitalist market of aluminum] Aluminii; mirovoi  
kapitalisticheskiy trynok. Moskva, Vneshtorgizdat, 1963. 165 p.  
(Aluminum--Marketing)

YELIZAROV, V.M.; BUZUK, R.V.

High-precision geometrical leveling at short distances. Izv.  
(MIRA 18:9)  
TPI 118:119-122 '63.

MAKSIMOV, Matvey Vasil'yevich; GORGONOV, Gennadiy Ivanovich;  
GUTKIN, L.S., prof., retsentent; YALIZAROV, V.N., inzh.,  
retsentent; LYUBIMOVA, T.M., red.

[Radio guidance of missiles] Radioupravlenie raketami.  
Moskva, Izd-vo "Sovetskoe radio," 1964. 643 p.  
(MIRA 18:1)

YELIZAROV, V. P., Cand Phys-Math Sci -- (diss) "Rings of individual associative rings." Moscow, 1960. 7 pp; (Academy of Sciences USSR, Mathematics Inst im V. A. Steklov); 165 copies; price not given; (KL, 17-60, 138)

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16.1600

Yelizarov, V.P.

TITLE:

On Quotient Rings of Associative Rings 16PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1960,  
Vol. 24, No. 2, pp. 153-170

TEXT: Let  $R$  be an associative ring,  $S$  an arbitrary multiplicatively closed system of its elements without zero. The homomorphous mapping  $\varphi$  (or  $\bar{\varphi}$ ) of  $R$  into a ring  $R'$  is called  $S$ - (or  $\bar{S}$ -) reducing if 1.) all elements from  $\varphi(S)$  (or  $\bar{\varphi}(S)$ ) possess two-sided inverse elements in  $R'$  (or  $\bar{\varphi}(S) \subset R'$ ) reducing if 2.) all elements from  $\varphi(S)$  (or  $\bar{\varphi}(S)$ ) are in  $R'$ . There exist  $\varphi(s) \in \varphi(S)$  and  $\varphi(r) \in R$  such that  $x = [\varphi(s)]^{-1} \varphi(r)$  (or  $\bar{\varphi}(s) \in \bar{\varphi}(S)$  and  $\bar{\varphi}(r) \in R'$ ) for  $x \in R$ ,  $s \in S$  and  $r \in R$ . The ring  $R$  is called  $S$ -simple (or  $\bar{S}$ -simple) if it contains no elements from  $S$  (or  $\bar{S}$ ) from  $r \in R$ ,  $s \in S$ ,  $rs \in I$  or  $sr \in I$  (or  $\bar{I}$ ). It follows  $r \in I$  (or  $\bar{I}$ ), 3.) to all  $r \in R$  and  $s \in S$  that  $s_1 r - r_1 s \in I$  (or  $\bar{s}_1 r - r_1 s \in \bar{I}$ ). The two-sided ideal elements  $r_1 \in R$  and  $s_1 \in S$  that  $s_1 r - r_1 s \in I$  (or  $\bar{s}_1 r - r_1 s \in \bar{I}$ ) there exist such

Theorem 1:  $I$  (or  $\bar{I}$ ) is  $S$ -simple (or  $\bar{S}$ -simple) if and only if it is the kernel of an  $S$ -reducing (or  $\bar{S}$ -reducing) mapping  $\varphi$  (or  $\bar{\varphi}$ ) of  $R$ .

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80204  
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On Quotient Rings of Associative Rings

The ring  $R_{(s)}$  is called generalized left quotient ring of  $R$  with respect to  $S$ , if 1.)  $R$  can be mapped into  $R_{(s)}$  by means of an  $S$ -reducing homomorphism  $\varphi$ , 2.) if  $R$  is mapped into a ring  $R'$  by means of an  $S$ -reducing homomorphism  $\varphi'$ , then there exists a homomorphic mapping  $\psi$  of  $R_{(s)}$  into  $R'$  such that  $\psi(\varphi(R)) = \varphi'(R)$ . The right quotient ring  $\bar{R}_{(s)}$  of  $R$  is similarly defined.

Theorem 2:  $R$  possesses a left (or right) quotient ring  $R_{(s)}$  (or  $\bar{R}_{(s)}$ ) with respect to  $S$  if and only if the intersection of all  $S$ -simple (or  $\bar{S}$ -simple) ideals of  $R$  is also an  $S$ -simple (or  $\bar{S}$ -simple) ideal of  $R$ .

Theorem 3: If  $R$  possesses an  $R_{(s)}$  (or  $\bar{R}_{(s)}$ ), then this is uniquely determined with respect to  $R$  and  $S$  except isomorphism.

Theorem 4: If  $R$  possesses the rings  $R_{(s)}$  and  $\bar{R}_{(s)}$ , then it is  $R_{(s)} \cong \bar{R}_{(s)}$  over  $R$  if and only if the intersection  $I$  of all  $S$ -simple ideals of  $R$  is identical with the intersection  $\bar{I}$  of all  $\bar{S}$ -simple ideals. The author proves several properties of the rings  $R_{(s)}$ , e.g.

Theorem 6: If  $R$  possesses an  $R_{(s)}$ , then the identical automorphism is the only endomorphism of  $R_{(s)}$  for which the ring  $\varphi(R)$  remains invariant. X

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80204

On Quotient Rings of Associative Rings

S/038/60/024/02/007

The author investigates ideals of the ring R and ideals of its quotient ring.

12 theorems and 6 lemmata are given altogether. The author mentions A.I. Uzkov.

There are 6 references: 1 Soviet, 3 American, 1 German and 1 Japanese.

PRESENTED: by A.I. Mal'tsev, Academician

SUBMITTED: April 27, 1959

Card 3/3

16(1)

S/020/60/130/06/002/059

AUTHOR: Yelizarov, V.P.TITLE: Ring of Quotients With Respect to the Simple Ideal

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp1186-1188 (USSR)

ABSTRACT: Well-known results on the quotient rings in commutative regions of integrity (compare [Ref 2]) are extended to generalized left quotient rings [Ref 1] of an arbitrary associative ring. Two theorems and five lemmas are given. The author uses essentially the results and notations of his unpublished lecture [Ref 1] at the Moscow Mathematical Society.

There are 2 references, 1 of which is Soviet, and 1 American.

ASSOCIATION: Matematicheskiy institut imeni V.A.Steklova Akademii nauk SSSR  
(Mathematical Institute imeni V.A.Steklov AS USSR)

PRESENTED: November 6, 1959, by A.I.Mal'tsev, Academician

SUBMITTED: November 2, 1959

Card 1/1

YELIZAROV, V.P.

Radical ring of quotients. Sib. mat. zhur. 3 no.3:360-367 My-Je  
'62. (MIRA 15:9)  
(Rings (Algebra)) (Aggregates)

GRINEVICH, K.P.; RODZEVICH, N.Ya.; SOBOLEVSKIY, M.V.; YELIZAROV, V.P.

Protecting steel and wood surfaces from overgrowths of  
mussels and from the effects of water. Plast.massy no.2:21-23  
'62. (MIRA 15:2)  
(Protective coatings)

YELIZAROV, V.P.

Some properties of rings of quotients. Sib. mat. zhur. 4 no.5:1053-  
1059 S-0 '63. (MIRA 16:12)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610011-4

YELIZAROV, V.P.

Nonsingular dimensional rings. Sib. mat. zhur. 6 no.5:1181-1184  
S-0 '65. (MIRA 18:10)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610011-4"

ANDREYEV, Ye.A., inzh.; YELIZAROV, V.R., inzh.

A device for high-frequency communication between the hoisting operator and the shaft inspector. Gor. zhur. no.10;70-71 O '65.  
(MIRA 18:11)

1. Severo-Kavkazskiy filial Konstruktorskogo byuro TSvetmetavtomatika.

YELIZAROV, V.S., inzhener.

Calculation of profile losses in marine turbine nozzles with exit edges of end thickness. Sudostroenie 23 no.8:24-29 Ag '57.

(MIRA 10:11)

(Marine turbines)

YELIZAROV, V.B., kand.tekhn.nauk; KAMNEV, G.F., kand.tekhn.nauk

Study of radical leaks in marine turbines and choosing the  
best size of covering, clearance, and degree of reaction in  
the stage. Sudostroenie 26 no.2:21-29 (208) Feb '60. (MIRA 14:11)  
(Marine turbines)

VOL'FSO, I.M.; YELIZAROV, V.S.; LOPATITSKIY, A.O.; OZERNOV, L.A.;  
TRIFONOVA, M.A.

Aerodynamic study of the operation of plane and annular cascades  
with TS-2A profiles developed by the Moscow Institute of Power  
Engineering. Trudy MEI no.47:31-36 '63. (MIRA 17:1)

YELIZAROV, V.P.

Relations between the generalized rings of quotients. Dokl.  
AN SSSR 135 no.2:252-254 N '60. (MIRA 13:11)

1. Predstavлено академиком А.И.Мальцевым.  
(Rings (Mathematics))

YELIZAROV, V.P.; PILATOVSKAYA, A.I.

Sufficient conditions for the existence of a quotient ring.  
Sib. mat. zhur. 5 no.5:1191-1194 S-O '64. (MIRA 17:11)

MATVEYEV, Gavriil Alekseyevich; KAMNEV, Georgiy Fedorovich; MARKOV, Nikolay Mikhaylovich; YELIZAROV, Vadim Sergeyevich; MOISEYEV, A.A., prof., doktor tekhn. nauk, retsenzent; PASHASHEV, A.N., zasl. deyatel' nauki i tekhniki RSFSR, prof., doktor tekhn. nauk, retsenzent; SERYUKOV, S.A., nauchnyy red.; VLASOVA, Z.V., red.; SHISHCHKOVA, L.M., tekhn. red.

[Aerodynamics of marine turbine blading] Aerodinamika protokhnoi chasti sudovykh turbin. By G.A. Matveyev i dr. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl. 1961. 362 p. (MIRA 14:9)  
(Marine turbines—Aerodynamics)

PHASE I BOOK EXPLOITATION

SOV/5847

Matveyev, Gavriil Alekseyevich, Georgiy Fedorovich Kamnev, Nikolay Mikhaylovich  
Markov, Vadim Sergeyevich Yelizarov

Aerodinamika prototchnoy chasti sudovykh turbin (Aerodynamics of the Gas-Flow  
Section of Ship Turbines) Leningrad, Sudpromgiz, 1961. 362 p. 2750 copies  
printed.

Reviewers: A. A. Moiseyev, Professor, Doctor of Technical Sciences, Honored  
Scientist and Technologist of the RSFSR, A. N. Patrashev, Professor,  
Doctor of Technical Sciences; Scientific Ed.: S. A. Serdyukov;  
Ed.: Z. V. Vlasova; Tech. Ed.: L. M. Shishkova.

PURPOSE: This book is intended for designers and research workers in ship-  
building. It may also be useful to students taking courses in ship-  
building and power machine building in schools of higher education.

COVERAGE: The book deals with the most common methods of aerodynamic  
investigation of the blade apparatus of ship turbines and gives the  
results of these investigations. Practical recommendations on the design

Card ~~2~~

## Aerodynamics of the Gas-Flow (Cont.)

SOV/5847

and heat computation of subsonic and supersonic blade apparatus are also given. Sections 4-6 of Ch. II, Sec. 10-11 of Ch. III, Sec. 13-14 of Ch. IV, Sec. 16-17 of Ch. V, Sec. 18, 20 of Ch. VI, Sec. 23 of Ch. VII, Sec. 29-31 of Ch. VIII, Sec. 34-37 of Ch. IX, and Sec. 39-40 of Ch. X were written by G. A. Matveyev; Sec. 5 of Ch. II, Sec. 25 of Ch. VII by G. F. Kamnev; Sec. 1-3 of Ch. I, Sec. 7 of Ch. II, Sec. 11-12 of Ch. IV, Sec. 19 of Ch. VI, Sec. 24, 27 of Ch. VII, and Sec. 33, 38 of Ch. IX by N. M. Markov; Sec. 8 of Ch. II, Sec. 15 of Ch. IV, and Sec. 26 of Ch. VII by V. S. Yelizarov; Sec. 21-22 of Ch. VI by G. F. Kamnev; Sec. 9 of Ch. III, and Sec. 28, 32 of Ch. VIII by G. A. Matveyev and G. F. Kamnev. No personalities are mentioned. There are 47 references: 41 Soviet (including 3 translations), 5 English, and 1 French.

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YELIZAROV, Yu., inzh.; KOVRIGIN, S., kand.tekhn.nauk; OSIPOV, G.,  
kand.tekhn.nauk

Limit the noise at reinforced concrete product plants.  
Stroitel' no.7:26-28 J1 '61. (MIRA 14:8)  
(Concrete plants) (Noise)

YELIZAROV, Yu.A.

Physiological properties of chemoreceptors of the tick *Ixodes persulcatus* P. Sch. during the action of repellents. Vest. Mosk. un. Ser. 6: Biol., pochv. 16 no.4:45-50 J1-Ag '61.  
(MIRA 14:7)

1. Kompleksnaya laboratoriya po izucheniyu sredstv i sposobov bor'by s vrednymi zhivotnymi i boleznyami rasteniy Moskovskogo gosudarstvennogo universiteta.

(INSECT BAITS AND REPELLENTS)

(TICKS)

(SENSE ORGANS—INSECTS)

YELIZAROV, Yu.A.

Investigation of chemoreception in insects and mites. Report  
No.1. Electrophysiological study on chemoreception in crickets.  
Nauch. dokl. vys. shkoly; biol. nauki no. 57-61 '62. (MIRA 15:3)

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarst-  
vennogo universiteta im. M.V. Lomonosova.

(CRICKETS)  
(SENSE ORGANS--INSECTS)

YELIZAROV, Yu.A. (Moskva)

Chemoreception of insects and repellents. Usp.sovr.biol. 54  
no.1:102-114 Jl-Ag '62. (MIRA 15:11)  
(INSECT BAITS AND REPELLENTS) (SENSE ORGANS—INSECTS)

YELIZAROV, Yu.A.

Study of chemoreception in insects and ticks; electro-  
physiological study of chemoreception in ixodid ticks.  
Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.6:16-24  
N-D '63. (MIRA 16:11)

1. Kafedra entomologii i kompleksnaya laboratoriya po  
izucheniyu sredstv i sposobov bor'by s vrednymi zhivotnymi  
i boleznyami rasteniy.

YELIZAROV, Yu.A., nauchnyy sotrudnik

How repellents work. Nauka i zhizn! 30 no.4:26-28 Ap '63.  
(MIRA 16:7)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo  
universiteta.  
(Insect baits and repellents)

ZOLOTAREV, Ye.Kh.; YELIZAROV, Yu.A.

Investigation of the chemoreception of insects and ticks; localization  
of chemoreceptors responding to repellents in the tick *Ixodes*  
*persulcatus* P.Sch. Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.1:  
7-9 '63. (MIRA 16:12)

1. Kafedra entomologii Moskovskogo universiteta.

ZOLOTAREV, Ye.Kh.; YELIZAROV, Yu.A.

Research on chemoreception in insects and ticks: behavior of  
Ixodes persulcatus P. Sch. ticks and the action of repellents.  
Med. paraz. i paraz. bol. 33 no.1:47-53 Jr-P '64 (MIRA 18:1)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo  
universiteta imeni M.V.Lomonosova.

YELIZAROV, Yu.A.

Study of chemoreception in insects and ticks. Report No. 1.  
Electrical activity of chemoreceptors of Haller's organ under  
the action of repellents. Nauch. dokl. vys. shkoly; biol.  
nauki no. 2:55-59 '64. (MIRA 17:5)

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarstvennogo  
universiteta im. M.V.Lomonosova.

ZOLOTAREV, Ye.Kh.; YELIZAROV, Yu.A.

Study of chemoreception in insects and ticks; characteristics  
of the function of chemoreceptors in the tick *Hyalomma asiaticum* P. Sch. et E. Sch. under the influence of repellents.  
Zool. zhur. 43 no.4:549-559 '64 (MIRA 17:8)

1. Biological-Soil Faculty, State University of Moscow.

YEVZAROV, Yu.A. (Moskva)

Chemoreception of blood-sucking Arthropoda. Usp. sovr. biol. 59  
no. 3; 416-432 May-Je '65. (MIRA 18:6)

YELIZAROV, Yu.A.

Study of the chemoreception of insects and ticks. Physiology  
of contact chemoreceptory sensilla in ixodid ticks. Zool.  
zhur. 44 no.10:1461-1472 '65.

(MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet.

ACC NR: AP7000994 (A,N) SOURCE CODE: UR/0439/65/044/010/1461/1472

AUTHOR: Yelizarov, Yu. A.

ORG: Moscow State University (Moskovskiy gosudarstvennyy universitet)

TITLE: Chemoreception in insects and ticks. Physiology of contact chemoreceptive sensillae in Ixodes ticks

SOURCE: Zoologicheskiy zhurnal, v. 44, no. 10, 1965, 1461-1472

TOPIC TAGS: animal physiology, insect physiology, chemoreception, entomology, insect, tick

ABSTRACT: Chemoreception of tarsal chemoreceptive hairs of *Hyalomma asiaticum* and *Ixodes persulcatus* ticks revealed that sodium chloride was the main stimulus and that increases in salt concentration resulted in increases in the impulse frequency of each receptor in the sensilla. Concentrations of salt approaching that of human and animal sweat were used. Salt concentration below 0.05 M produced no impulses, while use of 0.5 M concentration was complicated by the formation of salt crystals. The receptors differed in degree of adaptation. Chemoreception decreases with time (0--3 min). Amino acids and sodium chloride produced similar changes in pulse activity in *H. asiaticum*, while the

Card 1/2

UDC: 591.185.3:595.7+595.42

ACC NR: AP7000994

repellents Cuisol and dimethylphthalate produced unique changes in impulse frequency. Orig. art. has: 10 figures. [WA-50; CBE No. 14] [LP]

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 009

Card 2/2

YELIZAROV, Yu.M.

Establishing norms of industrial noises. Prom. stroi. 39 no.5:  
41-46 '61.  
(Noise)

YELIZAROV, Z.M.

Device for smooth lowering of measuring glasses on P.I.Zhukov's bottling  
automat. Spirit.prom. 20 no.2:39-40 '54.  
(Bottling machinery) (MIRA 7:6)

YELIZAROV, Z.M.; ZOTOV, Ya.V.

End piece for bottling machines. Spirit.prom. 20 no.2:41 '54. (MLRA 7:6)  
(Bottling machinery)

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CIA-RDP86-00513R001962610011-4

YELIZAROV, Z.M.; ZOTOV, Ya.V.

Holder for the removal of cording seal in bottle washing. Spirt.prom.  
20 no.3:38-39 '54. (MLRA 7:10)  
(Bottle washing)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001962610011-4"

YELIZAROV, Z.M.

ZOTOV, Ya.V.; YELIZAROV, Z.M.

Automatic machine for inspecting bottles applying sealing wax and  
impressing seals. Spirt.prom. 21 no.1:21-23 '55. (MLRA 8:5)

1. Muromskiy likero-vodochnyy zavod (for Zотов). 2. Glavnoye uprav-  
leniye spirtovoy promyshlennosti (for Yelizarov)  
(Liquor industry--Equipment and supplies) (Machinery,Auto-  
matic)

YELIZAROVA, A.

"Use Biological Methods to Combat Agricultural Pests"

Pravda, No. 81, 1950

W 11693,

YELIZAROVA, A. M.

"A Biological Method of Combating Comstock's Scale in Uzbekistan." Min. Higher Education,  
Tashkent Agricultural Inst., Tashkent, 1955. (Dissertation for the Degree of Candidate  
in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

YELIZAROVA, A. N.

"Acetylene Derivatives, Isomerization of Tertiary Vinylacetylenic Carbinol," Iz. Ak.

Nauk SSSR, Otdel. Khim. Nauk, No. 2, 1940. Acad. Sci. USSR, Inst. Organic Chem.,

-1940-.

**Derivatives of acetylene. XX. The reactions of acids.**

tion and of cleavage of 2,2-dimethyltetrahydro-1,4-hexadienoic acid; no neutral products were isolated. The pyrone, I, N. Nazarov and A. N. Kuznetsova, *Makro- and mikroreaktsii i sovremennoe rassledovaniye*, U. R. S. S., (Leningrad), 1941, 421-30 (in English, black), the reaction is energetic, 2 moles II being absorbed (30).--In their previous work (C. A. 36, 781) the per mole of the ketone, and HCl is freely evolved and after authors reported a product of hydration,  $C_6H_{10}O_3$  (I), of neutralization the reaction mass yields on distn. 8.4 g.  $Me_2C=CHCOCH_2CH_3$ . From a study of its properties *Eti iso-Bu ketone*, b. 130°, n<sub>D</sub><sup>20</sup> 1.4004; *semicarbazone*, m. 149.5-50°, no depression of mixed m. p. with an authentic ketone or either the pyrone or the furanone class. The sample. The chloro ketone (29 g.) in 50 cc. Me<sub>2</sub>CO was present investigation showed that the former structure is treated with 13 g. Na<sub>2</sub>CO<sub>3</sub> in 100 cc. H<sub>2</sub>O and heated to correct and that the compound, *2,2-dimethyltetrahydro-7a-Ketone* for 3 hrs., cooled, extd. with KOH, extd. with EtOH, 1,4-pyronate (II), I (22 g.) in 100 cc. H<sub>2</sub>O was treated at and the latter distd., giving 13 g. *β,β-Dimethylacryloyl ketone*, room temp. at first with 3% Na<sub>2</sub>CO<sub>3</sub>, then with a std. soln. of b. 47.5°, n<sub>D</sub><sup>20</sup> 1.4793, d<sub>40</sub><sup>20</sup> 0.9040; hydrogenation yields KMnO<sub>4</sub> (total, 100 g. KMnO<sub>4</sub>). The MnO<sub>2</sub> was filtered by H<sub>2</sub>O, characterized by the semicarbazone. The off and washed with H<sub>2</sub>O. The colorless H<sub>2</sub>O soln. was chloro ketone (16 g.) was treated with 75 cc. H<sub>2</sub>O and heated extd. with EtOH, which yielded 2 g. I. The H<sub>2</sub>O soln. was to 100° with vigorous stirring for 1.5 hrs., then cooled, cooled, acidified by 25% H<sub>2</sub>SO<sub>4</sub> and extd. with H<sub>2</sub>O, and with KOH, extd. with EtOH and the latter distd. to which after drying was cooled, to yield 2 g. of colorless oil, yield 10 g. I, b. 178.5°, n<sub>D</sub><sup>20</sup> 1.4480; *semicarbazone*, m. 185.0°, no depression when mixed with an authentic responded by analysis to a hydroxylsvaleric acid. Since sample, I heated with Ac<sub>2</sub>O at 100° for 4 hrs. remains unchanged. I (80 g.), 100 g. Ac<sub>2</sub>O and 5 drops concd. H<sub>2</sub>SO<sub>4</sub> conclude that it is the β-isomer. The H<sub>2</sub>O soln. after re-heated up to 185.90° for 3 hrs., then distd. *in situ*, removal of the above acid was further extd. with mixed yielded 30 g. *β-acetoxybutyl vinyl ketone*, b. 203-4.5°, KOH-EtOH in attempts to isolate glycolic acid. However, n<sub>D</sub><sup>20</sup> 1.4540, d<sub>40</sub><sup>20</sup> 1.0441, which, ozonized in dry CHCl<sub>3</sub> for ever, due to admixt. of the hydroxylsvaleric acid, the 10 hrs. and decompd. by H<sub>2</sub>O, followed by the usual treatment could not be obtained in cryst. form; hence, it was yielded formic, acetic and *β*-hydroxylsvaleric acids. oxidized by KMnO<sub>4</sub> and isolated as (CO<sub>2</sub>H)<sub>n</sub>, I (40 g.). Thus, the collective evidence shows I is II. XXI. The heated to 70.8° was treated with HCl gas for 1 hr.; after condensation of phenol and of *β*-crocol with dimethylvinyl-*β*-chloro-β-ethoxyvinylcarboxyl and vinylacetylenylacetylene. I, N. Nazarov and A. I. Kuznetsova, *Ibid.* 431-40 (in English, *racemic*, yielding 34 g. *2-Chloroisobutyl vinyl ketone*, b. 60.5-447).--The authors studied the possibility of alkylation of AgCl when the substance is treated with AgNO<sub>3</sub> in EtOH. *propenylacetylene*, using H<sub>2</sub>O, as catalyst. The carbonyl, The chloro ketone (11.8 g.) in dry C<sub>6</sub>H<sub>6</sub> was treated with b. 58.9°, n<sub>D</sub><sup>20</sup> 1.4781, was prep'd. by condensation of O<sub>2</sub> (6%) for 15.5 hrs.; the product decomps. with H<sub>2</sub>O in the KOH (Nazarev, C. A. 33, 6692); the hydrocarbon, *β-chloro-β-ethoxyvinylcarboxyl* was shown to contain formic and *β*-chloro-β-ethoxyvinylcarboxyl.

**Acetylene derivatives.** LXXX. Chemistry of *α*-aryl ketones. 14. Addition of hydrogen chloride to 5-methyl-1,4-heptadien-3-one. I. N. Nazarov and A. N. Elizarova. Zhur. Obshch. Khim. (J. Gen. Chem.) 18, 1681-6 (1948); cf. C.A. 43, 2163g.  $\text{CH}_3\text{CHCOCH}_2\text{CMeEt}$  (I), b.p. 68-70°, n<sub>D</sub><sup>20</sup> 1.4770 (cf. N., C.A. 35, 4731), (32.3 g.) treated with cooling with 9.0 g. dry HCl and let stand 20 hrs. gave 16.0 g. 5-*chloro*-3-methyl-1-hepten-3-one, b.p. 77-8°, n<sub>D</sub><sup>20</sup> 1.4765, d<sub>4</sub><sup>20</sup> 0.9093 (oxidation gave  $\text{HCO}_2\text{H}$ ,  $\text{MeCO}_2$ , and  $\text{EtCMeCH}_2\text{CO}_2\text{H}$ ), 7 g. of which, stirred with water 6 hrs. at 85-90°, gave 3.9 g. 3-methyl-2-ethylhexahydro-1,4-pyrene, b.p. 82-4°, n<sub>D</sub><sup>20</sup> 1.4520; the Cl ketone (20 g.) heated 4 hrs. with 12 g. KOAc and 80 ml. AcOH at 80° gave 10 g. 5-methyl-3-acetyl-1-hepten-3-one (II), b.p. 83-4°, n<sub>D</sub><sup>20</sup> 1.4808, d<sub>4</sub><sup>20</sup> 1.0027, hydrogenated over Pt in EtOH to 5-acetyl-3-methyl-1-heptanone, b.p. 97.5°, n<sub>D</sub><sup>20</sup> 1.4720, d<sub>4</sub><sup>20</sup> 0.9701, while ozonization gives  $\text{HCO}_2\text{H}$ ,  $\text{MeCO}_2$ , and  $\text{AcO}_2\text{H}$ , as well as the Ag salt of  $\text{MeC}_2\text{C}(\text{CH}_2)_2\text{CO}_2\text{H}$ . II (8 g.) let stand 2 hrs. with 1.9 g. KOH in 60 ml. MeOH gave 1.8 g. I; similar addition of 0.2 g. II to 2.7 g. KOH (10% excess) in 80 ml. MeOH gave 0.3 g. I and 3 g. 1-methoxy-5-methyl-6-hepten-3-one, b.p. 97-9°, n<sub>D</sub><sup>20</sup> 1.4555, which on distn. from  $\rho$ -MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H gave I. The hydrogenation mixt. of 8 g. II let stand 15 days at room temp. (with a Pt catalyst in KtOH) yields 4.4 g. 5-methyl-5-ethoxy-3-heptanone, b.p. 77-9°, n<sub>D</sub><sup>20</sup> 1.4290, d<sub>4</sub><sup>20</sup> 0.8887. LXXXI. Rearrangement of 1,3-diene system. 4. Irreversible isomerization of 5-phenyl-1,3-dienes - 5 of into 5-phenyl-2,4-pentadien-1-ol. I. N. Nazarov and L. B. Fisher. Izv. Akad. Nauk S.S.R., Otdel. Khim. Nauk 1948, 430-43. —  $\text{PAC}(\text{H}_2\text{O})_2\text{C}(\text{CH}_2)_2\text{CH}_2$  (I), obtained in 75% yield from Bell and  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{Mgl}_2$ , b.p. 115-17°, n<sub>D</sub><sup>20</sup> 1.5740. I (122 g.), 200 ml.  $\text{Et}_2\text{O}$ , and 49 g.  $\text{Cu-Zn}$  dust in 30 ml. water were stirred 15 hrs. at room temp.

and 10 hrs. at 28-30°, 40 g. more Cu-Zn and 30 ml. water added, and the process repeated 5 times for a total duration of 160 hrs.; distn. of the org. layer gave 93 g. 5-phenyl-1,3-pentadien-5-ol (II), b.p. 106-7°, n<sub>D</sub><sup>20</sup> 1.5925, d<sub>4</sub><sup>20</sup> 1.0132, which was stable on storage with pyrogallol for 6 months; the consts. differ from the less pure prepn. by Zal'kind and Kulikov (C.A. 40, 6014). Hydrogenation of II in EtOH over Pt gave  $\text{PhCH}(\text{OH})\text{Bu}$ , which on oxidation with Cr oxide and  $\text{AcO}_2\text{H}$  gave  $\text{PhCO}_2\text{C}_6\text{H}_5$ ; semicarbazone, m. 165-6°. Ozonization of II gave  $\text{BzH}_2$ ,  $\text{HCO}_2\text{H}$ ,  $\text{BrO}_2\text{H}$ , and a trace of  $\text{OH}_2\text{ acids}$ . II (10 g.) in 200 ml. 70% aq. dioxane, contg. 1%  $\text{H}_2\text{SO}_4$ , kept 10 hrs. at 40-5° gave 100% 5-phenyl-2,4-pentadien-1-ol (III), m. 80-1° (from petr. ether), b.p. 135-8°, which turns yellow and viscous on standing 2 months; the same product was obtained in 100% yield when the isomerization was conducted for only 30 min. Hydrogenation of III in EtOH over Pt gave 5-phenyl-1-pentanol, b.p. 134-5°, n<sub>D</sub><sup>20</sup> 1.5172, d<sub>4</sub><sup>20</sup> 0.9701; phenylurethane, m. 88-9° (from petr. ether); ozonization of III gave  $\text{BzO}_2\text{H}$  and  $\text{BzH}_2$ . II (12 g.) in 60 ml. dry  $\text{Et}_2\text{O}$  treated with 2.6 g. gaseous HCl at -5° and let stand 2 hrs. yielded 11.5 g. 1-chloro-5-phenyl-1,3-pentadiene (IV), m. 80-1° (from  $\text{Et}_2\text{O}$ ), b.p. 112-14°, which turns dark on standing and acquires the color of cinnamon; it readily loses Cl on treatment with  $\text{AgNO}_2$  in KtOH at 60-5° in 3 hrs. Stirring 12 g. IV in 80 ml. dioxane with 7.6 g.  $\text{NaHCO}_3$  and 50 ml.  $\text{H}_2\text{O}$  1 hr. at room temp. and 6 hrs. at 33-35° gave 4 g. II and 3.5 g. III, with 3 g. intermediate fraction. Ozonization of IV gave  $\text{HCO}_2\text{H}$ ,  $\text{BzH}_2$ , and  $\text{BrO}_2\text{H}$ . Similar treatment of III with dry HCl in  $\text{Et}_2\text{O}$  gave IV. To 10.6 g. IV in 20 ml. MeOH was added 3 g. Na in 50 ml. MeOH with cooling and, after standing overnight, the mixt. was kept

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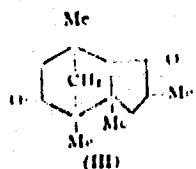
1 hr., at 80-8°, to give 2 g. crude *Mel*-deriv. of II, b.p. 80-110° and 3.9 g. pure substance, b.p. 110-12°,  $n_D^{20}$  1.5078,  $d_4^{20}$  0.8666; this, on hydrogenation in  $\text{HCO}_2\text{H}$  over Pt, gave 2-phenyl-1-pentanol (*Ac*, ether), b.p. 112-14°,  $n_D^{20}$  1.4900,  $d_4^{20}$  0.9133. LXXXII. Dimerization and structure of the dimer of 2-methoxy-1,3-butadiene and 2-(formyloxy)-1,3-butadiene. I. N. Nazarov, O. P. Verkhovskaya, and L. D. Bergelson. *Ibid.* 811-18.—2-(Formyloxy)-1,3-butadiene (I) and 2-methoxy-1,3-butadiene (II) dimerize on heating, giving *p*-substituted cyclohexenes: 1-[*l*-(formyloxy)vinyl]-4-(formyloxy)-3-cyclohexene (III), and 1-[*t*-(methoxymethyl)-4-methoxy-3-cyclohexene (IV), resp. I was prep. in 150-g. yield as follows: 6 g. *l*-acrylate, 5 ml.  $\text{BF}_3 \cdot \text{Et}_2\text{O}$ , and 6 ml.  $\text{Ac}_2\text{O}$  at 80° treated with 138 g. dry  $\text{HCO}_2\text{H}$ , followed by dropwise addn. of 184 g.  $\text{CH}_3\text{CH}(\text{C}_2\text{H}_5)\text{CO}_2\text{H}$ , followed by stirring at 16-21° over 2 hrs.,  $\text{CaH}$  and 120 ml.  $\text{Et}_2\text{O}$ ) with stirring at 16-21° over 2 hrs., stirring 3 hrs., letting stand overnight, washing with water, and evap. with  $\text{Et}_2\text{O}$ , gave I, b.p. 43.5°,  $n_D^{20}$  1.4555. A less efficient prep. gives 160 g. I by passage of 620 g.  $\text{CH}_3\text{CH}(\text{C}_2\text{H}_5)\text{CO}_2\text{H}$  into 6 g.  $\text{Hg}$  sulfate and 200 g. dry  $\text{HCO}_2\text{H}$  at 18-20° with stirring over 4.6 hrs. and addn. of 13 g.  $\text{Hg}$  sulfate over that period, followed by stirring 2 hrs. and letting stand overnight. Both procedures give variable amt. of III, the 2nd method giving up to 41 g. pure III, b.p. 110-21°,  $n_D^{20}$  1.4830,  $d_4^{20}$  1.1174. III on stirring with 3% HCl gives a quant. yield of 4-acetylcylohexanone, I (38 g.) and 0.8 g. pyrolyzed in 38 g. pure dioxane heated to 150° 8 hrs. gives pure III, b.p. 122-2.5°,  $n_D^{20}$  1.4918,  $d_4^{20}$  1.1671; III can be successfully isolated only if all precautions against moisture are taken; III darkens on storage and liberates  $\text{HCO}_2\text{H}$  and 4-acetyl-cyclohexanone; the latter, most readily obtained with 3% HCl at room temp., b.p. 109.5-100°,  $n_D^{20}$  1.4726,  $d_4^{20}$  1.0583; dimeric benzene, m. 211-12° (from  $\text{H}_2\text{O}$ ); dioxime, m. 146-7° (from  $\text{H}_2\text{O}$ ); oxidation by  $\text{KMnO}_4$  gives  $(\text{CH}_3\text{CO})_2\text{H}_2$ .

and  $\beta$ -acetylalipic acid, m. 100.6-101° (mimicarbazone, m. 93.5°). Oxidation of III gives  $\text{HCO}_2\text{H}$  and  $\beta$ -acetylalipic acid. Passage of 300 g.  $\text{CH}_3\text{CC}(\text{C}_2\text{H}_5)_2\text{H}$  in 8 hrs. into a stirred mixt. of 480 g. dry  $\text{HCO}_2\text{H}$ , 10 g.  $\text{Hg}$  sulfate, and 0.6 ml. concd.  $\text{H}_2\text{SO}_4$  at 40°, with addn. of 10 g.  $\text{Hg}$  sulfate, and stirring next day 3 hrs. at 85° and neutralizing with  $\text{NaOH}$ , gave 167 g. 1,1,1-trimethoxybutane, b.p. 102°,  $n_D^{20}$  1.4112; this (20 g.) and 0.5 g. powdered KOH heated to 140-21°, with dropwise addn. of 80 g. more trimethoxybutane, gave 26 g. II, b.p. 74.8-85.3°,  $n_D^{20}$  1.4438, and 14.5 g. 3,3-dimethoxy-1-butene, b.p. 88-100°,  $n_D^{20}$  1.4040. II heated in dioxane with pyrogallol inhibitor 30 hrs. at 180-20° gave 6 g. IV, b.p. 87-88°,  $n_D^{20}$  1.4820,  $d_4^{20}$  0.9052, easily hydrolyzed by 3% HCl to 4-acetylcylohexanone, while hydrogenation over Pd in  $\text{H}_2\text{O}$  gives 1-(1-methoxyethyl)-4-methoxy-cyclohexane, b.p. 97°,  $n_D^{20}$  1.4744,  $d_4^{20}$  0.9630. G. M. Kosolapoff

C.A.

**Acetylene derivatives XCIX.** Transformations of cyclopentenones. I. Isomerization of 1,3-dimethyl-1-cyclopenten-3-one into 1,3-dimethyl-3-cyclopenten-3-one. I. N. Nazarov and A. N. Elizarova. Izv. Akad. Nauk S.S.R. Otdel. Khim. Nauk 1951, 295-301; cf. C.A. 44, 10551, 45, 85161. — Cyclization of  $\text{CH}_3\text{CH}=\text{CH}-\text{COCH}_2\text{Me}$ : II, gave 1,3-dimethyl-1-cyclopenten-3-one (I), b.p. 105-0°, n<sub>D</sub><sup>20</sup> 1.4080; semicarbazone, m. 172-3°; 2,4-dinitrophenylhydrazone, m. 206-0°. Heating 40.4 g. chloroprene and 80.2 g. I with 1.2 g. pyrogallol 15 hrs. at 115-20° in an ampul gave 19.0 g. I, and 40.0 g. 1,3-dimethyl-3-cyclopenten-3-one (III), b.p. 181-2°, n<sub>D</sub><sup>20</sup> 1.4770, d<sub>4</sub><sup>20</sup> 0.9410; semicarbazone, m. 191-2° (from EtOH); 2,4-dinitrophenylhydrazone, m. 181-3° (from EtOH). Hydrogenation of II over Pt gave 1,3-dimethyl-3-cyclopentanone, b.p. 152-4°, n<sub>D</sub><sup>20</sup> 1.433; amide, m. 165-6°. Ozonolysis of II gave  $\text{HCO}_2\text{H}$  and  $\alpha$ -methylsuccinic acid, b.p. 120-2°, n<sub>D</sub><sup>20</sup> 1.4400 (semicarbazone, m. 177-8°). I isomerizes into II on heating to 118° with dry HCl, along with minor formation of the compd. (III), m. 95-6°. Heating I with concd. HCl to 75-80° gave largely II, along with smaller amounts of III; the action of concd. HBr is similar;  $\text{HgSO}_4$  and  $\text{AlCl}_3$  cause isomerization of I into II, but with poor yield; small

amounts of  $\text{H}_3\text{PO}_4$ ,  $\text{AcOH}$ , or  $\text{CH}_3\text{COOH}$  almost do not cause isomerization, while much  $\text{H}_3\text{PO}_4$  gives very low yields of II. Reducing I with  $\text{MeOH-K}_2\text{CrO}_4$  20 hrs. gave 40% II and a trace of III;  $\text{MeOH-KOH}$  gave similar results. Heating I 20 hrs. to 220-5° in sealed tube gave 21% II; no change at 175°. Heating II with maleic anhydride 10 hrs. at 100° gave a good yield of 1,4-dimethyl-1,4-endomethylene-3-keto-5,6-cyclohexanedicarboxylic acid anhydride, m. 150-69°, which gives no end test with  $\text{FeCl}_3$  and does not decolorize cold  $\text{KMnO}_4$ ; boiled with  $\text{H}_2\text{O}_2$  it yields the dicarboxylic acid, which loses  $\text{H}_2\text{O}$  at 100-105° and reverts to the anhydride; the acid forms a semicarbazone, decomp. 300-302°; heating the anhydride with  $\text{MeOH}$  yields the mono-Me ester, m. 107-8° (from  $\text{CaCO}_3$ ). II heated with dry HCl does not yield I by isomerization, and the small amounts formed appear to arise from decompos. of III, which forms in low yield if the heating extends 6 hrs. at 120-5°; refluxing II with  $\text{KOH-MeOH}$  20 hrs. gave unreacted II and a little III; II heated 20 hrs. to 200° in an ampul gave some 5% I. I mixed with powdered KOH gave a viscous mass, which, on extn. with  $\text{Et}_2\text{O}$  and evapn. of the solvent, gave a viscous yellow mass of a polymer of I. II (60 g.), 100 g. 20% formalin, and 60 ml. concd. HCl stirred 60 hrs. at 35-40° gave 26 g. II and 23 g. 1,3-dimethyl-1-hydroxymethyl-3-cyclopenten-3-one, b.p. 120-1°, n<sub>D</sub><sup>20</sup> 1.5025, d<sub>4</sub><sup>20</sup> 1.0535; semicarbazone, m. 204-5° (from EtOH); this hydrogenated over Pt gave the cyclopentanone, b.p. 90-9°, n<sub>D</sub><sup>20</sup> 1.4620, d<sub>4</sub><sup>20</sup> 1.0073 [semicarbazone, m. 173-4° (from  $\text{MeOH}$ )]. I (200 g.), 100 g. 20% formalin, and 3 ml. 2*N* NaOH stirred at room temp. 30 hrs. gave 180 g. I and 10 g. 1,3-dimethyl-4,4-bis(hydroxymethyl) cyclopenten-2-ol-3-one, b.p. 170-8° (decompn.), m. 93-0° [2,4-dinitrophenylhydrazone, m. 180-1° (from EtOH)]; it does not absorb II over Pt. I (75 g.) with  $\text{MeMgI}$  (from  $\text{Mg}$  +  $\text{MeI}$ ) gave 15 g. 1,3,5-trimethyl-3-cyclopentanone, b.p. 128-0°, n<sub>D</sub><sup>20</sup> 1.4015, d<sub>4</sub><sup>20</sup> 0.8185, which with II over Pt (no



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YELIZAROVA, A.N.

NESMEYANOV, A.N., akademik, otvetstvennyy redaktor; BOBROV, P.A., doktor khimicheskikh nauk, otvetstvennyy redaktor; YELIZAROVA, A.N., kandidat khimicheskikh nauk, chlen redaktsionnoy kollegii; KIPEN, Ye.P., kandidat khimicheskikh nauk, sekretar'; LIBERMAN, A.L., kandidat khimicheskikh nauk, chlen redaktsionnoy kollegii; NAGIBINA, T.D., kandidat khimicheskikh nauk, chlen redaktsionnoy kollegii; RUDENKO, V.A., kandidat khimicheskikh nauk, zamestitel' otvetstvennogo redaktora; BYDUS, Ya.T., doktor khimicheskikh nauk, chlen redaktsionnoy kollegii.

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(Chemistry, Organic)

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AS USSR

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Yelizarova, A.N., - Comparative Leaching Out of Several Isotopes.

The Sixth Session of the Committee for Determining the Absolute Age of Geologic Formations at the Department of Geologic-Geographical Sciences (OGGN) of the USSR Academy of Sciences at Sverdlovsk in May 1957

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Leaching AcK from minerals. Biol.Kem. po opr.abs.vozr.gol.form.  
no.3:60-61 '58. (MIRA 12:11)  
(Leaching) (Radium—Isotopes)

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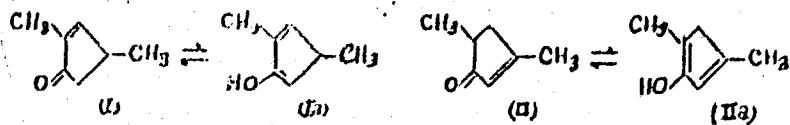
AUTHORS: Nazarov, I. N., Yelizarova, A. N.

TITLE: Acetylene Derivatives. 195. Transformations of Cyclopentenones. III. Dimerization of 2,4-Dimethyl-  
 $\Delta^2$ - and  $\Delta^4$ -Cyclopenten-1-ones and Conversions  
of the Resulting Tricyclic Diketones

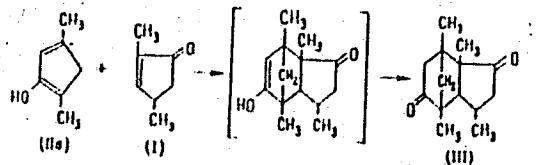
PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2,  
pp 450-462 (USSR)

ABSTRACT: The paper deals with dimerization of dimethylcyclopentenones and with establishment of the dimer structure.  
In reacting 2,4-dimethyl-  $\Delta^2$ -cyclopenten-1-one (I) with the enol form of 2,4-dimethyl  $\Delta^4$ -cyclopenten-1-one (IIa) (see scheme below for the structure of both isomers),

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(at room temperature, in presence of KOH powder, and using dry ether as solvent) a diketone (III) is formed:



(The dimer (III) is also formed under action of KOH, HCl, or NaOH on either ketone, owing to isomerization  $I \rightleftharpoons II$ ). Yield 35-40%, mp 94-95°. The diketone does not react with solutions of bromine or magnesium permanganate and is not hydrogenated

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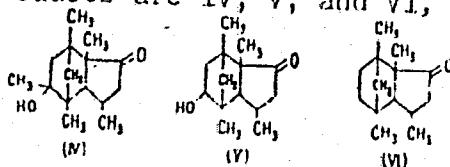
Acetylene Derivatives. 195. Transformations  
of Cyclopentenones. III

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under ordinary conditions, but decomposes on heating to 260-280° in a sealed ampoule to ketones I and II.

In reactions with  $MgCh_3I$ , [H, Pt] (in presence of sodium ethoxide) and [H, amalgamated Zn] (Clemmensen reduction) only one carbonyl group is reduced; the resulting products are IV, V, and VI, respectively:



In reacting III with semicarbazide and 2,4-dinitrophenylhydrazine, only monoderivatives are formed.

However, upon hydrogenation over Runey Ni at 100-120° under pressure and in reaction with hydrazine hydrate at 130-150°, both carbonyl groups react, forming 1,3a, 4,7-tetramethyl-4,7-endomethylenehexahydroindan-3,6-diol and the dihydrazone, respectively (the latter

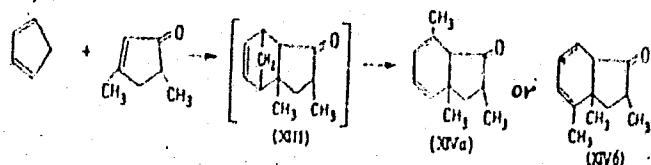
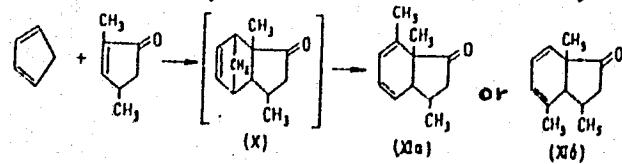
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Acetylene Derivatives. 195. Transformations  
of Cyclopentenones. III

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decomposes under action of KOH to a hydrocarbon; 1,3a,4,7-tetramethyl-4,7-endomethylenehexahydroindan).  
The authors have tried to obtain a lower homolog of VI by condensation of cyclopentadiene with 2,4-dimethyl- $\Delta^2$ - and  $\Delta^4$ -cyclopenten-1-ones. In presence of KOH powder, the respective products of condensation are: 1,3a,4(or 1,3a,7)- and 2,4,7a(or 2,7,7a)-trimethyl-3-keto-3a,7a-dihydroindans:



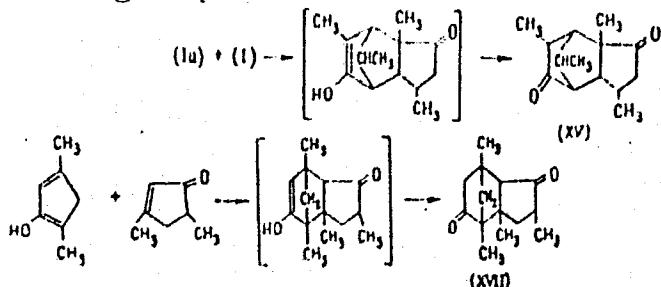
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Acetylene Derivatives. 195. Transformations  
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Both 2,4-dimethylcyclopentenones (I and II) also undergo (in presence of KOH) a diene condensation, forming respective dimers XV and XVII:



There are 7 references, 3 Soviet, 2 German, 2 U.S.

The U.S. references are: C. F. H. Allen, J. A. van Allan, J. Org. Ch., 20, 328 (1955); C. F. H. Allen, T. Davis, D. W. Stewart, J. A. van Allan, J. Org. Ch., 20, 310 (1955).

ASSOCIATION: Institute of Organic Chemistry of the Academy of Sciences,  
USSR (Institut organicheskoy khimii Akademii nauk SSSR)

SUBMITTED: February 12, 1959 Card 5/5

S/081/62/000/004/014/087  
B149/B101

AUTHORS: Starik, I. Ye., Starik, F. Ye., Yelizarova, A. N.

TITLE: Comparative leaching properties of some isotopes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 113, abstract 4G15 (Byul. Komis. po opredeleniyu absolyutn. vozrasta geol. formatsiy, AN SSSR, no. 14, 1961, 160-165)

TEXT: Investigation has been made of leaching the isotopes of Ra, Th, and Pb from specimens of uraninites (from Chkalov and Kamennaya Taybola mines) and monazite (Alakurti). The methods of determination used were as follows: Th by colorimetry; Ra, ThX, AcX, RdTh, RdAc, UX<sub>1</sub> and Ac - radiochemically; Pb - electrolytically; the isotope analysis of Pb by mass-spectrometry. The leaching of Ra isotopes (Ra<sup>226</sup>, ThX and AcX) has been carried out in 0.1 N HNO<sub>3</sub> from the demolished and intact specimens of uraninite. The demolished specimen showed larger percentage of leaching, and in both specimens AcX and ThX > Ra. The leaching from uraninites of Th has been carried out in 0.1 and 0.01 N HNO<sub>3</sub>, 0.1 N

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Comparative leaching properties...

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<sup>35</sup>  
<sup>40</sup>  
<sup>45</sup>  
<sup>50</sup>  
<sup>55</sup>  
 $\text{Na}_2\text{CO}_3$ , that of Ac in 0.1 N  $\text{HNO}_3$ . Preponderant leaching of R<sup>d</sup>Th as compared to Th, as well as a high percentage of UX, and Ac leaching, are noted. The leaching of Pb isotopes from monazite (5 N  $\text{HNO}_3$ ) and uraninite Kamennaya Taybola (0.1 and 0.01 N  $\text{HNO}_3$ ) showed the following results (in % of the isotope content in the mineral); for monazite  $\text{Pb}^{204}$  44;  $\text{Pb}^{206}$  9.65;  $\text{Pb}^{207}$  8.3;  $\text{Pb}^{208}$  3.05; for uraninite  $\text{Pb}^{206}$  7.4 and 4.9;  $\text{Pb}^{207}$  7.3 and 5;  $\text{Pb}^{208}$  19.9 and 12.8. Thus,  $\text{Pb}^{206}$  and  $\text{Pb}^{207}$  are being leached to a larger degree from monazite, and  $\text{Pb}^{208}$  from uraninite, which is related to the different forms of presence of Pb isotopes in the minerals, as well as to the particular position of U and its decay products in Th minerals, and of Th, and its decay products in U minerals.  
[Abstracter's note: Complete translation.]

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STARIK, I.Ye.; STARIK, F.Ye.; YELIZAROVA, A.N.

Determination of protactinium and actinium in uraninite. Biul.Kom  
po opr.abs.vozr.geol.form. no.5:72-75 '62. (MIRA 15:11)  
(Uraninite) (Geological time)

S/186/61/003/006/008/010  
E040/E185

AUTHORS: Starik, I.Ye., Starik, F.Ye., and Yelizarova, A.N.

TITLE: Direct determination of protactinium and actinium  
in uranites

PERIODICAL: Radiokhimiya, v.3, no.6, 1961, 749-754

TEXT: Detailed knowledge of the relative concentrations of individual radioisotopes in the various radioactive series of elements is absolutely essential in interpretation of radioactive dating data obtained especially by the lead technique. In case of the actinide series, the radioactive equilibrium between Pa<sup>231</sup>,

U<sup>227</sup> and U<sup>235</sup> can be determined by a direct measurement only, because indirect methods pre-suppose a priori that such an equilibrium already exists. As a continuation of the previously undertaken investigations of the authors on the radiochemistry of uranites (lead dating and separation of isotopes), a direct determination was made of protactinium and actinium in samples of the same mineral, using methods reported previously (Ref. 9; I.Ye. Starik, A.P. Ratner, M.A. Pasvik, L.D. Sheydina, ZhAKh,

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Direct determination of protactinium.. S/186/61/003/006/008/010  
E040/E185

v.12, 1, 87, 1957. Ref.10: I.Ye. Starik, L.D. Sheydina, ZnHKh, v.3, 1, 140, 1958). It was found that radioactive equilibrium exists between protactinium and actinium in well preserved specimens of uranites. Because of this, the authors find it difficult to generalise the results to include various weakly-radioactive minerals. D.M. Ziv and Ye.A. Volkova are mentioned in connection with their contributions in this field.

There are 6 tables and 16 references: 10 Soviet-bloc and 6 non-Soviet-bloc. The English language references read as follows:  
Ref.6: A.G. Maddock, G.L. Miles, J.Chem.Soc., s.i., v.2, 248, 1949.  
Ref.7: A.V. Grosse, M.S. Agruss, J.Am.Chem.Soc., v.56, 10, 2200, 1934.

Ref.8: A. Grosse, J.Am.Chem.Soc., v.52, 5, 1742, 1930.

SUBMITTED: August 3, 1960

Card 2/2